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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,111	11/13/2001	Nicolae G. Cotanis	5929.0016-01	6450
22852	7590	10/03/2005	EXAMINER	
FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP 901 NEW YORK AVENUE, NW WASHINGTON, DC 20001-4413			CRAVER, CHARLES R	
			ART UNIT	PAPER NUMBER
			2682	

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,111

Applicant(s)

COTANIS, NICOLAE G.

Examiner

Charles R. Craver

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-27,30,31 and 33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20,22-24,27,30 and 33 is/are rejected.
- 7) ☒ Claim(s) 21,25,26 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11-31-01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6-24-05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 6-24-05 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance for DE 4428729 A1 (even if it is referred to in the Search Report), as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over P. Stockl GSM/DCS Coverage Measurement System (hereafter Stockl) in view of Gaskill US 5,602,831.

Claims 20, 30 and 33:

Stockl teaches a method and computer (memory/code) system for determining signal coverage for a wireless device (title, abstract) comprising the steps of:

Receiving signal strength information for a signal (page 323, C2, last paragraph to page 324, C1 first two paragraphs teaches field strength measurements such as SNR and BER and being capable of measuring parameters to determine the quality of a signal eg power. Also see page 326, C1, 3rd paragraph/bullet which refers to RxQual and RXLev, where RXLev is interpreted as received power,

Receiving location information representing a geographical location for one or more first locations (page 324, C1 bottom paragraph teaches use of GPS),

Determining one or more local means based on the received signal strength information (page 324, C2, 6th paragraph teaches statistical analysis that includes "averaging over user-defined intervals"), and

Estimating one or more second locations for the one or more local means based on the one or more first locations (page 324, C2, 7th paragraph cartographic representation, as does page 327, 1st paragraph which states displaying graphics on current position based on GPS. Also, figure 2 on page 329, which shows route/location and figure 3 shows a "detailed display" box in the upper left corner that identifies Cell ID, Mobile Country Code, Mobile Network Code and Location Area Code which all can be used to determine position),

Transforming the one or more second locations into a route (page 326, C1 1St paragraph #2 teaches cartographic representation of data collected along a test route), and

Calculating the signal coverage for the route based on a signal coverage for least one of the one or more second locations (page 323-324 teaches calculating via

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statistical evaluation of data with regard to signal reception/strength as recorded during the test trip and ultimately provide signal coverage data - this would be based on "Good/Bad" data points regarding RXLEV, BER, Rxqual, etc., see page 327).

Stockl fails to disclose that that the one or more subsets are determined based on a speed of a receiver of the received signal strength information.

Gaskill teaches optimizing packet size to eliminate effects of poor reception according to the speed of motion of the receiver (abstract). Hence one skilled in the art would have understood that the speed of the receiver can be used to optimize RF transmission based on current and projected location. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Stockl such that the speed of the receiver is determined, to provide means for including the receiver's speed of motion to optimize RF communications and also understand where the user is and how fast they are moving.

Claim 24:

Stockl further teaches the step of receiving location information for one or more second location including one or more of the following: LAT/LONG and at least one of a plurality of first time stamps from a receiver of GPS information (page 324, C1 bottom paragraph teaches use of GPS which inherently provides LAT/LONG and Time. Figure 4 also shows measurements vs. time).

Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stockl in view of Gaskill as applied to claim 20 above, and further in view of LeBlanc et al. US 5,960,341 (hereafter LeBlanc).

Claim 22: Stockl teaches claim 20 but is silent on determining a standard deviation based on the received signal strength information.

One skilled realizes the benefits of using a standard deviation calculation to enhance data interpretation and Leblanc teaches the Bollinger Bands method that reads data points and create a moving average and a moving standard deviation (C26, L39-53).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Stockl in view of Gaskill, such that standard deviation is used, to provide means for optimizing errors via mathematical formulas.

Claim 23: Leblanc further teaches the basic idea behind Bollinger Bands is to read data points and create a moving average and a moving standard deviation. The bands are determined by calculating the average of a certain number of data points plus and minus two times the standard deviation of the data. A "sliding window" is used for the volatility of the data. The optimal window size will vary with the condition of the data. As shown in FIG. 13, Bollinger Bands provide: (1) the ability to handle discontinuities and vast multi-model, noisy search spaces', and (2) they optimize error wherever possible, i.e., wherever field measurements have a low volatility, then Bollinger Bands will generally have a low bandwidth, which results in a more accurate bounding polygon (C26, L39-53).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 20, 23 and 27 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10, 16 and 17 of copending Application No. 09/929,034 in view of Stockl.

This is a provisional obviousness-type double patenting rejection.

Regarding claim 20, Claim 11 of '034 discloses applicant's invention except for the creation of a route, which Stockl discloses as well-known (page 324, C2, 7th paragraph cartographic representation, page 327, 1st paragraph which states displaying graphics on current position based on GPS. Also, figure 2 on page 329, which shows route/location and figure 3 shows a "detailed display" box in the upper left corner that identifies Cell ID, Mobile Country Code, Mobile Network Code and Location Area Code which all can be used to determine position, page 326, C1 1st paragraph #2 teaches cartographic representation of data collected along a test route, page 323-324 teaches calculating via statistical evaluation of data with regard to signal

reception/strength as recorded during the test trip and ultimately provide signal coverage data - this would be based on "Good/Bad" data points regarding RXLEV, BER, Rxqual, etc., see page 327). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to add such a feature, as it allows proper system testing. Note that instant claims 22 and 27 correspond to '034 claims 16 and 17.

Allowable Subject Matter

Claims 21, 25, 26 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 21 and 31 disclose the invention of claims 20 and 30 above and include a novel formula for the step of calculating.

Claim 25 discloses the method of claim 24, wherein said step of transforming further comprises the step of determining the route based on the plurality of latitudes and the plurality of longitudes and dividing the route into at least two segments based on the plurality of latitudes and the plurality of longitudes when the at least two segments exceed a route break distance. Claim 26 adds that said step of determining the route further comprises the step of transforming the plurality of latitudes and the plurality of longitudes into the routes such that the route includes one or more directions and one or more distances arranged to form the route.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles R. Craver whose telephone number is 571-272-7849. The examiner can normally be reached on M-F 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on 571-272-7868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CC
September 29, 2005


**CHARLES CRAVER
PRIMARY EXAMINER**